KAGAN, P. B., CAND PHYS-MATH SCI, "FUNCTIONAL SPACES CONJUGATED WITH S. L. SOBOLEV SPACES AND THEIR APPLICATION TO BOUNDARY VALUE PROBLEMS FOR DIFFERENTIAL EQUATIONS IN PARTIAL DERIVATIVES." NOVOSIBIRSK, 1961. (ACAD SCI USSR, SIBERIAN DEPT. JOINT SCI COUNCIL FOR PHYS-MATH AND TECH SCIENCES). (KL-DV, 11-61, 208).

KAGAN, . I.

Gurevich, I. ., Kagan, . I. and Kagan, D. I.--"Effect of preliminary specific and non-specific immunotherapy on the frequency of occurrence of sulfonresisting gonorrhea in men," Nauch. zapiski Gor'k. in-ta dermatologii i venerologii i Kafedry kozhnovenerich. bolezney GMI, im. Kirova, Issue 12, 1948, p. 253-57

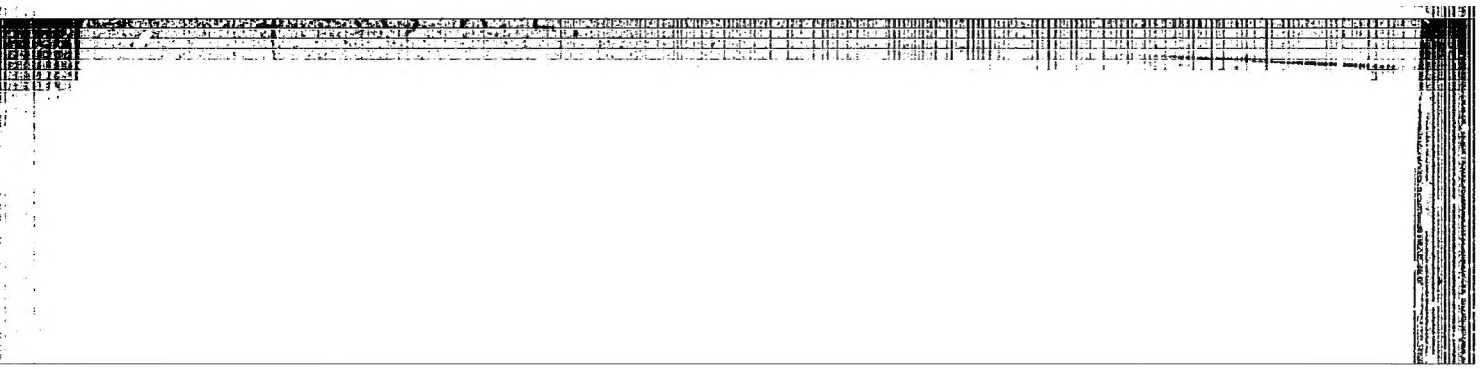
SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

[illegible], F. I.

Kagan, F. I., Kagan, E. I. and Gurevich, I. M. "On the [illegible] and cure of gonorrhea in men," Nauch. zapiski Ukr. [illegible] in-ta [illegible] i venerologii i Kaf. [illegible] kozhno-venerich. [illegible] im. Kirova, Issue 12, 1948, p. 287-92

(Gen)

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949)



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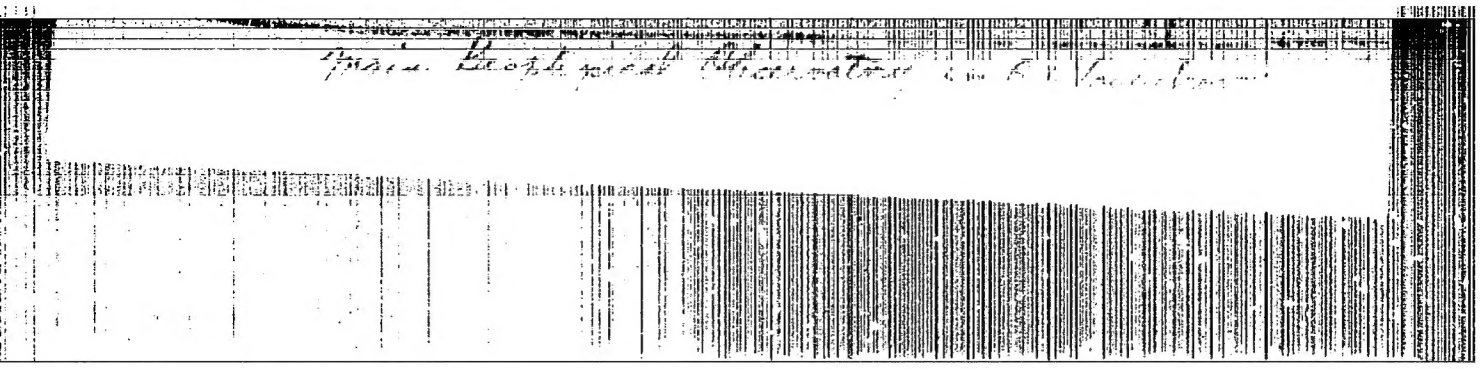

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AARAN K. L.

PHASE I BOOK EXPLOITATION SOV/4174
SOV/2-8-99

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy chislennogo prognoza i teorii klimata (Problems in Numerical Weather Forecasting and Climatology). Leningrad, Gidrometeoizdat, 1959. 129 p. (Series: Its. Trudy, vyp. 99) Errata slip inserted. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Eds.: M.Ye. Shvets, Doctor of Physics and Mathematics, and M.I. Yudin, Doctor of Physics and Mathematics; Ed. (Inside book): T.V. Ushakova; Tech. Ed.: N.V. Volkov.

PURPOSE: The publication is intended for specialists in the field of dynamic and synoptic meteorology and climatology, as well as for graduate students in these fields.

COVERAGE: This is a collection of 11 articles published as No. 99 of the Transactions of the Main Geophysical Observatory imeni. A.I. Voyeykov and dealing

Card 1/5

Problems in Numerical Weather (Cont.) SOV/4174

with new methods of numerical analysis prognosis. Individual articles are concerned with contiguous problems of climatology: temperature anomalies in the atmosphere, effect of the heat of condensation on pressure changes, numerical prognosis of the pressure pattern affected by orographic factors, and the hydrodynamic theory of frontal cyclogenesis. References accompany each article.

TABLE OF CONTENTS:

Rakipova, L.R. Formation of the Mean Monthly Anomalies of Atmospheric Temperature 3

Kagan, R.L. Calculating the Effect of the Condensation Heat Flow and of the Stratosphere on Change in the Pressure Pattern 15

Bogdanova, N.P. Approximative Evaluation of the Effect of Heat Released by Condensation on the Change in Pressure Pattern Near the Ground 37

Du Sin-yuan'. More Precise System of Calculating the Irregularities of the Earth's Surface in Numerical Methods of Forecasting 43

Card 2/3

3(7) SOV/50-59-2-2/25

AUTHOR: Kagan, R. L.

TITLE: Influence of Condensation Heat Supply on the Pressure Change According to Time (Vliyaniye kondensatsionnykh pritokov tepla na izmeneniye davleniya vo vremeni)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 2, pp 7-14 (USSR)

ABSTRACT: In the article under review the change of the geopotential according to time is investigated. Consideration is given only to heat supplies caused by condensation, while heat supply due to radiation is not taken into account. N. I. Yudin's method (Ref 2) is used to determine the change in the geopotential, both in the presence and absence of a cloud layer. For the heat supply in layers I and III outside the clouds formula (1) is used, and it is assumed that $\varepsilon = 0$. Approximation equation (3) is used to determine the heat supply in cloud layer II. ε is the heat supply due to condensation for the mass unit per time unit in agitated air. Formula (5) which is used to determine the geopotential is derived. Both the system of equations (10) for layers outside the clouds and the system of equations (12) for the cloud layer can be

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Influence of Condensation Heat Supply on the Pressure Change According to Time

obtained from this formula (5). The constants contained in these equations are found by means of the boundary conditions (8) and (9). They are introduced into (10) and (12), and the problem posed is solved. A concrete case is then investigated by way of example. On the grounds of the results obtained the author concludes as follows: 1) The influence of heat supply due to phase changes on the change in the geopotential of isobaric areas at a considerable distance from the cloud is small. (Here and further on, changes are discussed in comparison with changes in cloudless atmosphere). The closer these isobaric areas approach the clouds, the stronger becomes the influence. It is strongest at the outer edges of the cloud. The signs differ at the different sides of the cloud. The influence is lowest in the center of the cloud. 2) If the isobaric areas are immediately above the clouds the phase supply increases the geopotential in the upper part of the cloud in the case of heat advection, and decreases it in the case of cold advection. For the levels of the lower part of the cloud and in the layer below the cloud phase supplies lower the geopotential in the case of heat advection, and raise it in the case of cold advection.

Influence of Condensation Heat Supply on the Pressure Change According to Time

3) If the isobaric areas of the layer are situated above the cloud, the phase supply increases the geopotential in the upper part of the cloud layer in the case of advection of cyclone eddies, and also in the case of cold advection. 4) The influence of heat advection at different levels on the geopotential change exclusively due to heat supply through phase transformations can be compared, in the case of levels near the cloud boundaries, to the influence of heat advection on the geopotential change in a cloudless atmosphere. The relative change of the influence of the eddy advection due to phase supplies is not as great, but still considerable. The influence of heat advection and that of an eddy advection may have diffefent signs on different levels, and may thus compensate each other. Thus, the influence of heat supply due to condensation may vary according to the distribution of heat and eddy advection in space. The results obtained confirmed the assumption of some scientists that the freeing of heat due to condensation may considerably add to the force of the cyclogenesis process. At the same time the results permit numerical estimations of this effect. There are 1 figure, 1 table, and 6 references, 2 of which are Soviet.

S/050/60/000/05/01/020
B007/B014

3.5000

AUTHOR: Kagan, R. L.

TITLE: On the Influence of Heat Inflows During Condensation on the Vertical Air Currents in the Atmosphere

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 5, pp. 3-10

TEXT: A method is given here for computing the instantaneous values of vertical velocity and of condensation in the cloud, providing the cloud boundaries b_1 and b_2 be known, on the basis of a given thermobaric field in the atmosphere. Formula (1) is written down for computing the vertical velocities and is solved by means of the method suggested by M. I. Yudin (Ref. 2): formula (9). It can be seen therefrom that the vertical currents are safely determined in every point at given cloud boundaries b_1 and b_2 by the heat advection- and whirl fields in the atmosphere. At $b_1 = b_2$ the solution passes over into that for a cloudless atmosphere, which is also made use of in the practice. A comparison of the two solutions reveals the following: clouds exert a considerable influence upon the vertical currents in the areas near the clouds. This influence is

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especially high in the cloud center. Clouds augment the influence of the thermal factor $M = RA_T$ (R denotes the gas constant, A_T is the heat advection). The advection of the anticyclonic whirl promotes on a certain level the formation of positive $\tilde{w}$-values, i.e. of descending currents below this level and of rising currents above it. $\tilde{w} = \frac{1}{p_0}\frac{dp}{dt}$ is a quantity similar to that of the vertical velocity. p_0 is the standard pressure at sea level. The advection of cyclonic whirls exerts the opposite influence. By and large, the influence of the cloud consists in the strengthening of the dynamic factor at the vertical passing through the respective point. The influence of vertical currents at the earth's surface decreases more slowly with increasing distance from the earth's surface in the presence of a cloud, than occurs in a cloudless atmosphere. Conclusions given here are illustrated by Figs. 1 and 2. Thus, vertical currents increase in the presence of a cloud in consequence of phase heat inflows (heat inflows in consequence of condensation in the time unit for the unit of mass of the shifting air (Ref. 1)) according to their absolute magnitude. This increase

On the Influence of Heat Inflows During Condensation on the Vertical Air Currents in the Atmosphere

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is of the same order as the one at vertical currents in the respective thermobaric field in a cloudless atmosphere. If the vertical currents in the atmosphere are known, also the amount of humidity condensed in the cloud can be computed from formula (14). It is shown by Fig. 3 that the condensation of humidity is promoted by the following factors: heat advection at all levels above the respective point, low-temperature advection above the neighboring points, advection of anticyclonic whirl in the lower half of the troposphere and the advection of the cyclonic whirl in the upper half of the troposphere. There are 3 figures and 3 references, 2 of which are Soviet.

3.5000
Card 3/3

LAYKHTMAN, D.L.; KAGAN, R.L.

Some problems associated with improved organization of snow surveys. Trudy GGO no.108:3-18 '60. (MIRA 13:11)
(Snow surveys)

FAGAN, N.L.

Calculation of vertical ... formation in the clouds.
Trudy ... no. 114:... (... 14:...)
(Cl... ...)

KAGAN, R. L., CAND PHYS-MATH SCI, "EFFECT OF STRATIFICATION upon the DYNAMICS OF LARGE-SCALE MOVEMENTS IN THE ATMOSPHERE." LENINGRAD, 1961. (LENINGRAD ORDER OF LENIN STATE UNIV IM A. A. ZHDANOV). (KL, 3-61, 203).

GANDIN, L.S.; KAGAN, R.L.

Accuracy of determining the mean depth of the snow cover from discrete data. Trudy GGO no.130:3-10 '62. (MIRA 15:7)
(Snow surveys)

KAGAN, R.L.

Calculation of some meteorological elements allowing for flows of condensation heat in clouds. Trudy GGO no.121:67-79 '61.
(MIRA 15:5)

(Meteorology)

KAGAN, R.L.

Accuracy of extrapolating the depth of the snow cover in time. Trudy GGO no.130:38-50 '62. (MIRA 15:7)
(Snow surveys)

KAGAN, R.L.; IAYKHTMAN, D.L.

Optimum snow surveying methods. Trudy GGO no. 112:78-86 '63. (MIRA 17:5)

GANDIN, L.S.; KAGAN, R.L.

Accuracy of determining the mean value from discrete data.
Trudy GGO no. 112:87-99 '63. (MIRA 17:5)

ACCESSION NR: AP4023380 S/0049/64/000/002/0302/0308

AUTHOR: Kagan, R. L.

TITLE: Computation of the inertia of an instrument during meteorological measurements

SOURCE: AN SSSR. Izv. Seriya geofizicheskaya, no. 2, 1964, 302-308

TOPIC TAGS: inertia, meteorological measurement, meteorological element, inertial instrument, inertia free instrument, averaging period

ABSTRACT: It is possible to obtain average values of a meteorological element f for the preceding period of time T (the averaging period) in the record if measurements are made with an inertia-free instrument. But such instruments are very complex, and treatment of the records are very laborious. The meteorological element may be expressed by

$$f_1(t)=\frac{1}{T}\int_{t-T}^{t} f(t')\,dt',$$

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ACCESSION NR: AP4023380

where t is the instant of time corresponding to the end of the averaging period. Inertial instruments are commonly used in practice, therefore, and the turbulent pulsations in the meteorological values are smoothed. The corresponding function for the inertial instrument is

$$f_2(t) = \frac{1}{T_0} \int_{-\infty}^{t} f(t') e^{-\frac{t-t'}{T_0}} dt'$$

where T_0 is the time constant of the instrument. The task here is to compare values of f_1 and f_2 and to determine the conditions under which these differ least from each other. In this process the author has considered errors in measurement to be negligible. He has determined the mean square difference between the values (δ^2). Limiting cases are examined for $T = 0$ and $T \to \infty$. It becomes clear in this examination that one may choose, for any T_0, a value for the averaging period T that corresponds to a minimal value of δ^2. Computations are made for several specific values, and it is concluded that the results indicate that for the broad class of meteorological elements the optimal period of averaging

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ACCESSION NR: AP4023380

is approximately 1.73 times the time constant of a linear instrument. "In conclusion, the author expresses his thanks to L. L. Braginskaya for her part in making the computations." Orig. art. has: 1 figure, 1 table, and 26 formulas.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova (Main Geophysical Observatory)

SUBMITTED: 22Jul63 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: AS NO REF SOV: 004 OTHER: 001

Card 3/3

KAGAN, R.L.; VINNIKOV, K.Ya.

Mapping of radiation measurements from meteorological satellites.
Trudy GGO no.166:227-234 '64.
(MIRA 17:11)

L 14022-66 EWT(1)/FCC GW

ACC NR: AT6004187 (N) SOURCE CODE: UR/2531/65/000/174/0003/0020

AUTHOR: Braginskaya, L. L.; Kagan, R. L.

ORG: none

TITLE: Precision determination of mean values using instantaneous readings of inertial devices

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 174, 1965. Metodika meteorologicheskikh nablyudeniy i obrabotki (Methods of meteorological observation and processing observation data), 3-20

TOPIC TAGS: meteorologic instrument, meteorologic observation, error function, error correction, inertial equipment

ABSTRACT: The authors examine the problem dealing with the accuracy of substituting averaged values of meteorologic elements for a certain time period using instantaneous readings of inertial devices. It is shown that the optimum period of averaging the readings for a linear device is approximately 1.7 times greater than the constant time of the device. Orig. art. has: 24 formulas and 9 tables. [Based on author's abstract].

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 004/

Card 1/1

L 14021-66 EWT(1)/FCC GW

ACC NR: AT6004188 (N) SOURCE CODE: UR/2531/65/000/174/0021/0034

AUTHOR: Kagan, R. L.

ORG: none

TITLE: Calculation of inertia of a device for meteorologic measurements

SOURCE: Leningrad. Glavnaya geofizicheskaya obsevatoriya. Trudy, no. 174, 1965. Metodika meteorologicheskikh nabludeniy i obrabotki (Methods of meteorological observation and processing observation data), 21-34

TOPIC TAGS: meteorologic instrument, meteorologic observation, error measurement, error correction, inertial equipment

ABSTRACT: The author analyzes the problem of accuracy of readings of an inertial device which characterizes the instant and averaged values of the measured magnitude. The effect of inertia on the correlative functions obtained by an experimental method is evaluated. Orig. art. has: 52 forumlas and 2 tables. [Based on author's abstract].

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001/

Card 1/1

[redacted]

[redacted] Interpolation. Trudy OGG no.[redacted] '65.
(MIRA 18:8)

L 14217-66 EWT(1) GW

ACC NR: AT6004197 SOURCE CODE: UR/2531/65/000/174/0158/0174

5-4
13+1

AUTHOR: Kagan, R. L.

ORG: Main Geophysical Observatory, Leningrad (Glavnaya geofizicheskaya observatoriya)

12,44,55

TITLE: Calculation of thermal radiation fluxes in the cloudless atmosphere

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 174, 1965. Metodika meteorologicheskikh nablyudeniy i obrabotki (Methods of meteorological observation and processing observation data), 158-174

TOPIC TAGS: radiation intensity, heat radiation, ozone, atmospheric radiation

ABSTRACT: The author considers various problems involved in using computers for calculating thermal radiation fluxes. It is found that Kondratiev-Niilisk transmission functions give results practically identical to those of Shakhkter functions in calculating flows of ascending thermal radiation in the cloudless atmosphere without consideration to the presence of ozone. Accounting for the albedo of the underlying surface for thermal radiation introduces slight corrections into the calculations

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2

L 14217-66
ACC NR: AT6004197

which may be disregarded as a rule. Outgoing radiation flux at the boundary of the atmosphere may be identified with the flow of ascending radiation at the 100 mb level within the limits of computational error. In calculating the ascending radiation, data on standard isobaric surfaces may be used. When calculating descending and effective radiation, it is necessary to use data from particular sounding points. Random errors of 20-30% in determining the humidity at high levels introduce comparatively low errors into the results of the calculation. The relative humidity or downward dew point deficit may be extrapolated when there are no data on the humidity for these levels. The accuracy of flux calculations using the proposed method is comparatively low (relative errors of up to 5% are allowable). The calculations may be made more accurate by taking account of the presence of ozone and the ground level temperature discontinuity. Orig. art. has: 1 figure, 8 tables, 23 formulas.

SUB CODE: 08/ SUBM DATE: 00/ ORIG REF: 003/ OTH REF: 005

Card 2/2

KAGAN, R.L.

Accuracy of determining the area mean according to data of point measurements. Trudy GGO no.175:117-130 '65.

(MIRA 18:8)

1. Glavnaya geofizicheskaya observatoriya im. A.I.Voyeykova, Leningrad.

L 01755-67 EWT(1) GW
ACC NR: AT6029354 (N) SOURCE CODE: UR/2531/66/000/191/0035/0046

AUTHOR: Gushchina, M. V.; Kagan, R. L.

47
45
84

ORG: none

TITLE: Statistical structure of a precipitation field

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 191, 1966. Primeneniye statisticheskikh metodov v meteorologii (The application of statistical methods in meteorology), 35-46

TOPIC TAGS: practical meteorology, rain, diurnal variation, statistic analysis, correlation statistics, error statistics, mean square error

ABSTRACT: The statistical structure of the rainfall field in north-central regions of the SSSR is analysed and the data is used for evaluating the accuracy of rainfall estimates averaged over a given area. Correlation functions were calculated for the amount of precipitation over short periods of time at two points under three variants--for days of simultaneous precipitation at both stations, days when there was rain at only one station, and regardless of the presence or absence of rain at either station. The precipitation field has a well defined statistical structure and correlation between the amount of rain at different stations extends for considerable distances. The territory and especially the topography of the region very significantly affects

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L 01867-67 EWT(1) GW
ACC NR: AT6029361 (N) SOURCE CODE: UR/2531/66/000/191/0122/0132

AUTHOR: Kagan, R. L.

ORG: none

39
12

TITLE: Reduction of meteorological elements over an area

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 191, 1966. Primeneniye statisticheskikh metodov v meteorologii (The application of statistical methods in meteorology), 122-132

TOPIC TAGS: meteorology, weather forecasting, weather station, storm, atmospheric movement, wind velocity, rain, statistic analysis, correlation statistics, probability, least square method

ABSTRACT: The author had concluded earlier that in problems of reducing meteorological elements values of measurements at the center of an area could be replaced by values averaged over the area. The present work discusses the correlation between values of a meteorological element at a point and averaged over an area and the greater accuracy obtainable by exchanging the latter not with measurements at the central point but with data obtained by some method of averaging, considering the statistical behavior of the element. The method of least squares is proposed for correcting data at individual points. The regression equation is examined: $f'_s = \bar{f}_s + (f_0 - \bar{f}_0)\frac{\sigma_s}{\sigma_0} r$, where f'_s is

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the average value of the element f over an area S, $\sigma_s + \sigma_o$ are the mean square deviations of the averaged and the point values, and r is the correlation coefficient between the point and averaged values. Errors obtained by using the regression equation are significantly smaller than when using data for the point at the center of the square. For occasions where $\bar{f}_o \neq \bar{f}_s$, such as rainfall occurring over only a part of the area, the probability of simultaneous precipitation at different points is calculated and the proportional value for precipitation is assigned to the central point. The specific reduction coefficient p can be determined by integrating

$$p = \int_{-\frac{1}{2}}^{\frac{1}{2}} \int_{-\frac{1}{2}}^{\frac{1}{2}} v\left(l\sqrt{x^2+y^2}\right) dx\,dy. \qquad (23)$$

if the relationship between the distance l and the probability v(with coordinates x,y) of precipitation at a certain point is known. Examination of earlier data showed p depends on the area but is essentially independent of the shape of the area. For areas over 10,000 km^2, $p =< 0.8$; for 1000 km^2 area $p = 0.9$, i.e., on days when it is raining at the station the rainfall depth over the 1000 km^2 is only about 90% of that at the station. There is comparatively little difference in the duration and recurrence characteristics at individual points and over the territory for local phenomena such as radiation fogs and frosts. But the probabilities of advective phenomena, such as rain and thunderstorms, change rapidly. Models stylizing data of the phenomenon were used

L 01867-67
ACC NR: AT6029361

in order to readily establish a quantitative relationship between probability characteristics of the phenomenon at an individual point and over an area. A simple model with a minimum number of parameters was constructed to simulate thunderstorms. Formulas were developed for approximating the average duration of the storm at a given point and over a given territory, and for determining the number of stormy days over the territory. Assuming wind velocity of 36 km/hr the average duration t_r, in hours, of the storm in a territory of r kilometers radius is approximately $t_r = t_0 + 0.035r$. The developed equations are not applicable to large territories and do not provide for differences between frontal and air mass storms. However, the data obtained from these calculations compared favorably with empirical calculations described in A. N. Lebedev's works. It is concluded that formulas of this type can be used to approximate the probability characteristics of advective type phenomena. Orig. art. has: 33 equations, 2 figures and 2 tables.

SUB CODE: 04, 12/ SUBM DATE: none/ ORIG REF: 005

Card 3/3 LC

L 07903-67 EWT(1) GM

ACC NR: AT6029352 (N) SOURCE CODE: UR/2531/66/000/191/0018/0021

AUTHOR: Gandin, L. S.; Kagan, R. L.

ORG: none

TITLE: Approximation for characteristics of a statistical structure

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 191, 1966. Primeneniye statisticheskikh metodov v meteorologii (The application of statistical methods in meteorology), 18-21

TOPIC TAGS: meteorology, statistic analysis, interpolation, correlation function

ABSTRACT: Statistical characteristics such as correlation and structural functions are important in the theory of random functions as applied to meteorological problems. The parameters of these characteristics are determined by the statistical treatment of experimental material. The authors demonstrate, for a one-dimensional case, how an interpolation for a meteorological element can be made by using measurements of this element at equidistant points. The optimal interpolation suggested by Gandin is used, based on the method of least squares. It is also shown that the data on statistical structure can be used for finding the formulas of optimal integration; however, the construction of the correlation functions requires more detailed information than needed for the solution of a concrete problem. Orig. art. has: 13 equations.

SUB CODE: 04, 12/ SUBM DATE: none/ ORIG REF: 002

Card 1/1

L 07898-67

ACC NR: AT6029360

functions. Tabulations are given of the values of correlation fuctions for exponential structures, of the relationship between correlation functions of averaged and point values, of normalizod correlation functions of point and averaged values and of normalized cross-correlation functions of avoraged and point values, of factors calculated for various structural parameters, and of deviation and correlation of averaged values for various structural parameters. By using these tables the transition from point value functions to correlation functions of averaged values may be readily accomplished. This is illustrated by examples based on previously published data wherein comparisons of spatial correlation functions of total rainfall at individual points and averaged over a given area, or of the time correlation functions of rainfall per unit time and averaged over a longer period, are graphically presented. The tabular data presented may be used in evaluating other aspects of statistical structure. Orig. art. has: 17 tables, 5 figures and 57 equations.

SUB CODE: 04, 12/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 2/2

L 07900-67 EWT(1) GW

ACC NR: AT6029358 (N) SOURCE CODE: UR/2531/66/000/191/0077/0085

35
15+1

AUTHOR: Kagan, R. L.

ORG: none

TITLE: Optimal formulas for numerical integration of random functions of a special kind

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 191, 1966. Primeneniye statisticheskikh metodov v meteorologii (The application of statistical methods in meteorology), 77-85

TOPIC TAGS: correlation function, least square method, wind, atmospheric turbulence

ABSTRACT: The authors obtained formulas for num erical integrations of stationary random functions with a linearly decreasing correlation function. The formulas are optimal in the sense of the method of least squares. The case of exponential correlation function was treated by Candin, L. S., Soloveychik, R. E. (Zap. Leningradskogo gornogo instituta, t. 43, vyp. 3, 1964). The case of a linearly decreasing correlation function is of practical importance, for instance, at large-amplitude wind fluctuations for distances of about 1000 km. Orig. art. has: 2 tables and 35 equations.

SUB CODE: 04, 12/ SUBM DATE: none/ ORIG REF: 002

Card 1/1 dc

KAGAN, R. N.

USSR/Chemistry - Soaps
Emulsions, Gelatinized

Nov/Dec 48

"Gelatinized Emulsions: VI, The Quantitative Emulsified Nature of Oleates of Sodium, Calcium, Rubidium and Cesium," L. Ya. Kremnev, R. N. Kagan, Chair of Colloid Chem, Leningrad Technol Inst imeni Lensovet, 4½ pp

"Kolloid Zhur" Vol X, No 6

Study determines the critical width of protective water layers in saturated, concentrated emulsions stabilized by oleates of sodium, calcium, rubidium, and cesium. Establishes the emulsive capacity of alkali oleates by determining the maximum surface Sc, generated by one cu m of stabilizer solution during the formation of such emulsions. Soaps are located in the following series (the emulsive capacity of sodium oleate being used as unity): Oleates Na: K: Rb: Cs = 1: 2: 2.85: 5.0. Submitted 2 Oct 47.

65/49T8

SMIRNOV, A.; SILKIN, A. (Zhdanov); SHCHERBAKOV, G.; KAGAN, S.; KOZLOV, P. (g.Rovno)

Readers relate, advise and criticize. Sov. profsoiuzy 18 no.16: 34-35 Ag '62. (MIRA 15:8)

1. Chelyabinskiy metallurgicheskiy zavod (for Smirnov). 2. Sotrudnik Kostromskoy oblastnoy gazety "Krasnyy Sever", g. Vologda (for Shcherbakov). 3. Zaveduyushchiy yuridicheskoy konsul'tatsiyey Kostromskogo oblastnogo soveta professional'nykh soyuzov, g. Vologda (for Kagan). 4. Neshtatnyy korrespondent zhurnala "Sovetskiye profsoyuzy" (for Kozlov).
(Vologda Province--Employees, Dismissal of)
(Rovno Province--Blood donors)
(Chelyabinsk--Steel industry--Technological innovations)

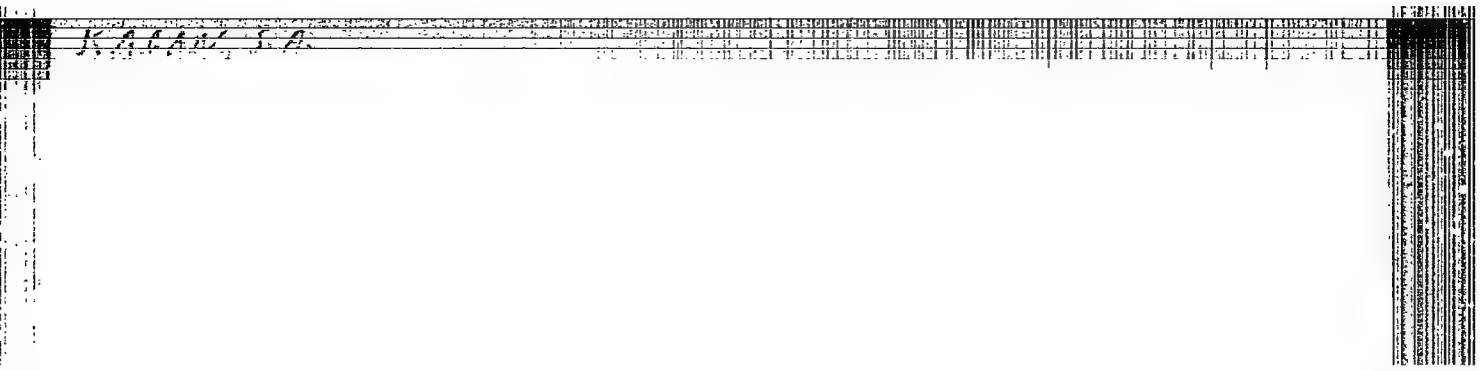
KAGAN, S., inzh.

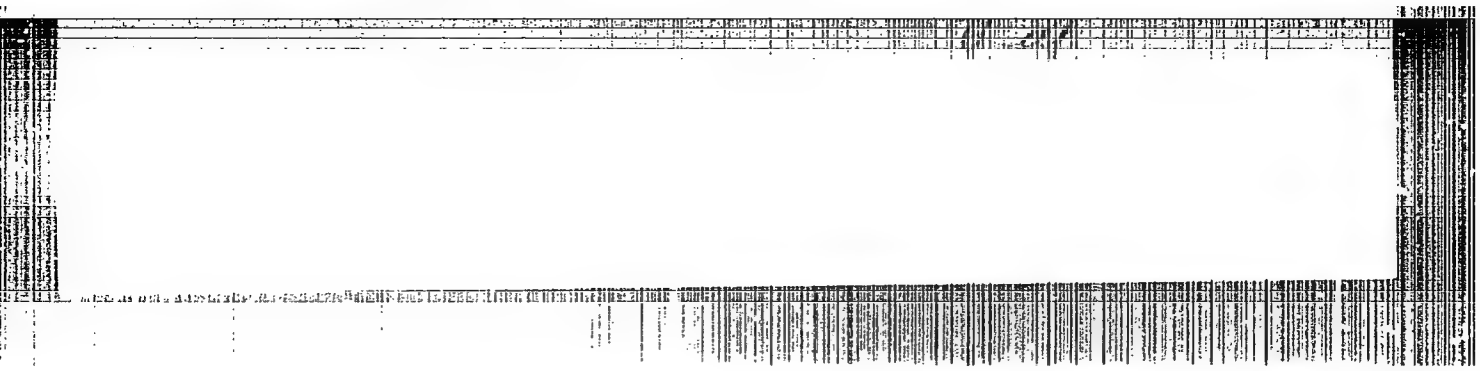
Testing a sealing paste. Mor. flot 25 no.11:30-31 N '65.
(MIRA 18:11)

[illegible], [illegible]

"Determination of Deformations of Multiple-Story Frames of High Buildings from a Horizontal Load." Cand Tech Sci, Sci Res Inst of Construction Engineering, Moscow, 1953. Dissertation (Referativnyy Zhurnal--Mekhanika, Moscow, Feb 54)

SO: [illegible] 1 6, 1[illegible] [illegible] 1954





APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910015-9"

KAGAN, S.A., kand. med. nauk

Experience in the study of the ultrafine structure of human spermatozoa in oligozoospermia and necrospermia. Urologiia 28 no.5:34-38 S-O'63 (MIRA 17:4)

1. Iz urologicheskoy kliniki (zav. - prof. M.N. Zhukova) Gosudarstvennogo ordena Lenina instituta usovershenstvovaniya vrachey imeni Kirova.

KAGAN, S. A.

Antitoxic liver function in surgical renal diseases. Vest. khir. Grekova, Leningr. 71 no.4:8-11 1951 (CLML 21:1)

1. Of the Department of Urology (Head -- I. N. Shapiro), Leningrad Order of Lenin Institute for the Advanced Training of Physicians imeni S. M. Kirov.

KAGAN, S.A., kand.med.nauk

Ureteropyeloplasty of a single pyonephrotic kidney. Vest.khir. no.6:112-113 '61. (MIRA 15:1)

1. Iz kliniki voyenno-morskoy khirurgii (nach. - prof. A.A. Bocharov) Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova i bol'nitsy im. Uritskogo (gl. vrach - D.A. Shushkov).
(KIDNEYS--DISEASES) (KIDNEYS--SURGERY)
(URETERS--SURGERY)

L [illegible] EWT(d)/EWP(e)/EWT(m)/EWP(w)/EWP(v)/T-2/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/JG/WB/EM/DJ/WH/JH

ACC NR: AP6006725 SOURCE CODE: UR/0303/66/000/001/0073/0074

AUTHOR: Yasinskaya, G. A.; Kagan, S. F.

ORG: none

TITLE: New refractory materials for boiling zinc

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 1, 1966, 73-76

TOPIC TAGS: refractory compound, corrosion resistance, zinc, metal physical property, metal grain structure, protective coating

ABSTRACT: Corrosion resistance to boiling zinc and zinc vapors of numerous high-temperature refractory materials was tested under laboratory and working conditions because of the failure of presently used materials to withstand the sustained action of molten zinc at boiling temperature. This problem arose, for instance, in conveying liquid metal, where thermocouples, pipings, and electromagnetic pumps have to be made of corrosion-resistant materials or coated with such materials, if they are to withstand continuous and prolonged use in contact with liquid metal at high temperature. The tests described in this article were conducted jointly by the Institute of the Science of Materials, AS USSR, and the Leningrad Chemical Plant im. D. I. Mendeleyev, to

Card 1/4 UDC: 667.613

precisely develop new refractory materials which would meet the above requirements.

Samples formed into crucibles or cylinders were first submitted to the action of molten zinc under laboratory conditions, and then to boiling zinc, contained in a muffle, for periods up to 12.5 days. The corrosion resistance of the samples was evaluated from visual and micrographic observations and changes in weight and dimensions. Some of the data are summarized in Table 1.

The micro-structure and properties of the boride (TiB_2, ZrB_2, CrB_2, and W_2B_5), $MoSi_2$, the nitride (TiN, ZrN, and AlN), Si_3N_4 + SiC, BNC, and Si_3N_4 + BN samples did not change after they were exposed to the action of boiling zinc. Formation of a dense, zinc-impregnated titanium oxide crust on the TiB_2 sample protected it from further corrosion by oxygen present in the muffle atmosphere. The most corrosion-resistant carbide, titanium carbide, displayed a change in structure and decrease in microhardness.

Refractory compounds of the nonmetallic type, AlN, BN, Si_3N_4[sic], Si_3N_4 + SiC alloy, Si_3N_4 + BN alloy, and BNC were singled out for practical applications as highly corrosion-resistant to and barely wettable

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Table 1. Experimental data of the refractory samples in boiling zinc at 940°C

Sample	Residence time in dr. hr	Position in the melt	Specific corrosion, g/cm²	Visual observation
Titanium boride	240	On the surface	+0.02	Insignificant slag adherence
Zirconium boride	180	"	+0.15	Slag adherence partially absent
Chromium boride	120	"	+0.006	"
Tungsten boride	168	Immersed	-0.014	Clean surface, no slag adherence
Titanium carbide	120	On the surface	-0.042	Unchanged externally
Zirconium carbide	120	"	-3.8	Loose sample, lost strength
Chromium carbide	24	"		Sample dissolved in the melt
Molybdenum carbide	168	"	+0.14	Considerable slag sticking
Tungsten carbide	144	Immersed	-0.015	Thin oxide film
Molybdenum silicide	204	On the surface	—	Sample thermally unstable
Titanium nitride	48	"	+0.02	Insignificant surface oxidation
Silicon nitride	204	On the surface	+0.022	Significant slag adherence
Silicon carbonitride	300	"	+0.041	Thin cinder-like layer
Boron carbonitride	204	"	-0.053	No visible change
Boron carbonitride	204	"	-0.026	Significant overgrowth with zinc oxide (easily separable)
Alloy *	264	"	-0.008	"

* Si, B, + Mo

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L 42069-66

ACC NR: AP6006725

by molten zinc at boiling temperature. Moreover, these materials can easily be profiled into a given shape with the help of metal-cutting tools and are cheaper than the refractory compounds of the metallic type (compounds of the IV-VI group transition metals).

Boron carbonitride, silicon carbonitride, and AlN refractory materials of the nonmetallic type, TiB_2, ZrB_2, CrB_2, W_2B_5, TiN, ZrN, and, conditional on an increase in thermal stability, $MoSi_2$ materials of the metallic type may be recommended for use in contact with molten and boiling zinc. In view of the relatively high price of the metallic-type refractory compounds, their use as protective coatings was indicated; they may be conveniently sprayed on ceramic or metallic products by means of plasma guns. Orig. art. has: 1 table. [FSB: v. 2, no. 7]

SUB CODE: 11 / SUBM DATE: none / OTH REF: 001

Card 4/4 af

KAGAN, S.G.

Wear resistance of D16,5/20-1 diesels. Energ.biul.no.7:1-4 Jl '56.
(Diesel engines) (MLRA 9:10)

KAGAN, S.G.

Modernization of "Pioner" diesels. Energ. biul. no.11:24-28 N '56.
(Diesel engines) (MLRA 9:12)

KAGAN, S. G.

AID P - 2367

Subject : USSR/Engineering

Card 1/1 Pub. 28 - 1/13

Author : Kagan, S. G.

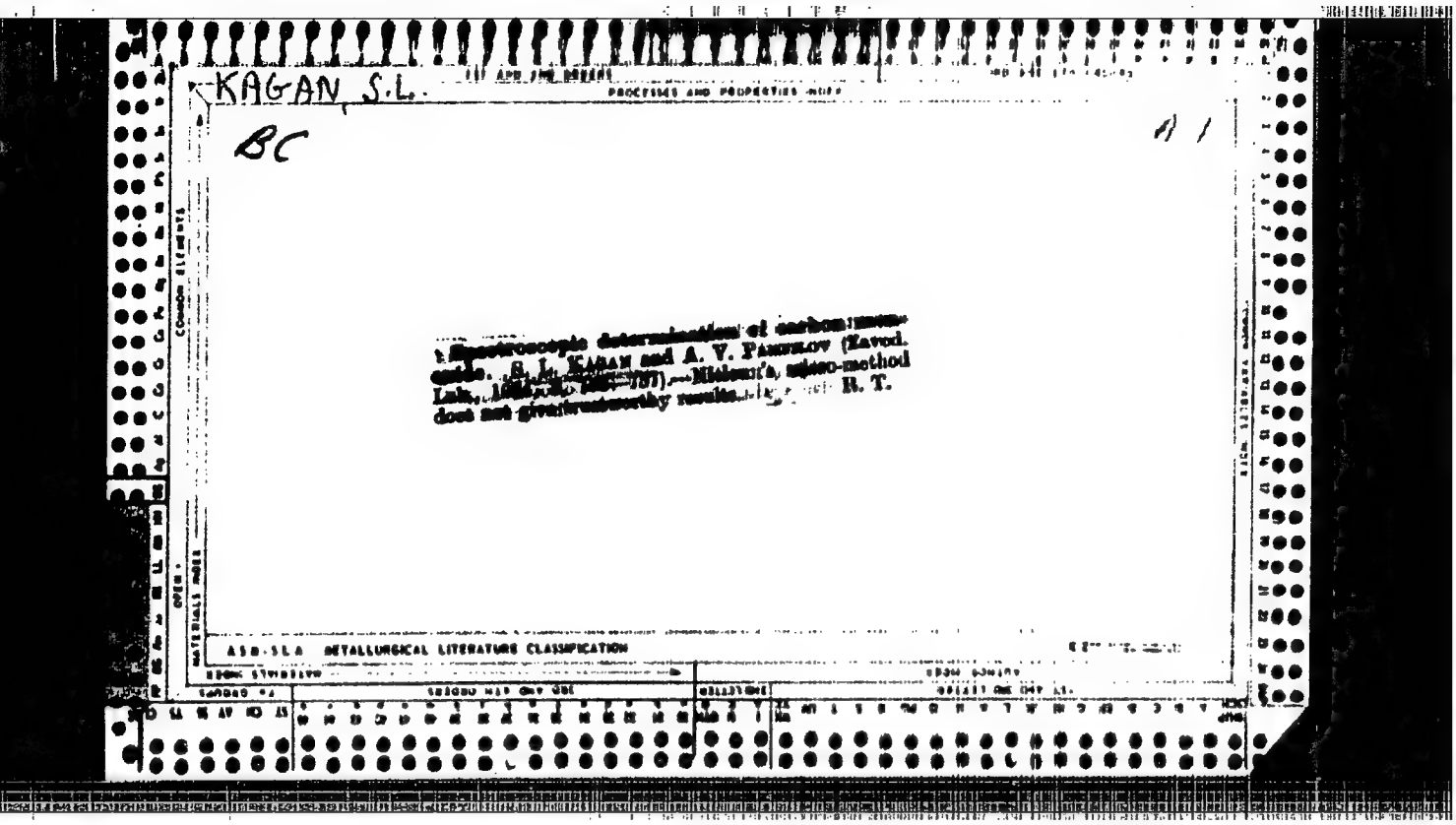
Title : Operation of the 2d - 16.5/20-1 engine with water-cooling loop system

Periodical : Energ. Byul 6, 1-3, Je 1955

Abstract : In order to make it possible to operate the 2D - 16.5/20-1 diesel (50 HP and 750 rpm) in arid regions, i.e. with a closed circulating water system, the S-80 tractor radiator and fan driven by the KDM - 46 motor were utilized with success. A sketch of the installation, a diagram of engine performance, and two tables with pertinent data are attached.

Institution: None

Submitted: No date



CA KAGAN, S.L.

7

Methods for determining low concentrations. VIII. Determination of carbon monoxide. V. V. [illegible] and S. L. Kagan. (Zav. Chem. (U. S. S. R.) 4, [illegible] (1934); cf. Tels and Vagner, C. A. 29, [illegible]. Methods ordinarily used for the detn. of small amts. of CO gave results varying within wide limits. In analyzing samples of air contg. 0.0001–0.0773 mg. CO per l., by oxidation with CuO at 270–280°, the results varied from 58.67 to 77.08% of the CO contained. In another series of detns., where concn. of CO was 0.077 to 0.079 mg./l., the results were 122.70–350.88% of the amt. contained. Similarly, the oxidation with HgO and I_2O_5 gave irregular results.

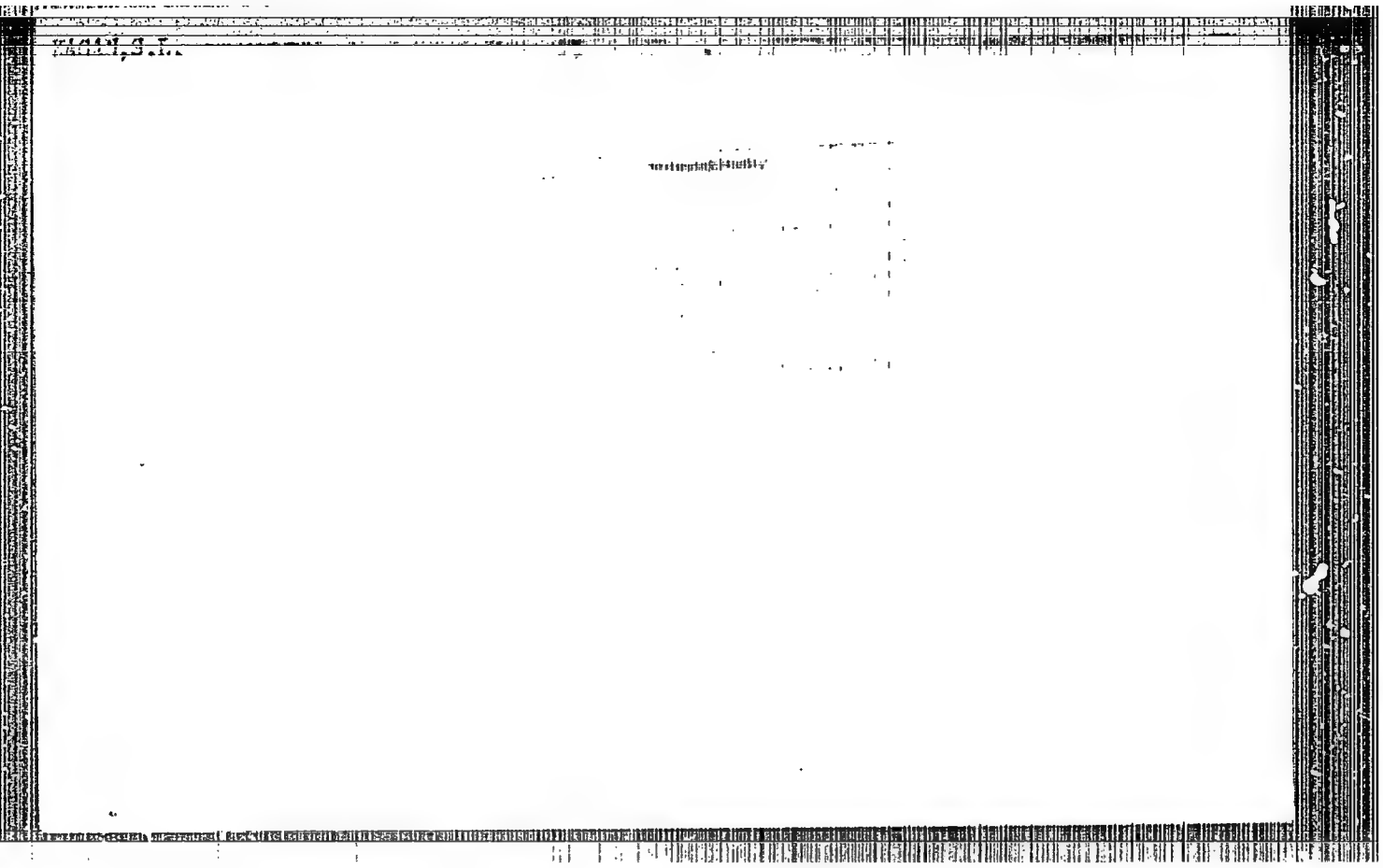
S. L. Madorsky

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

KAGAN, S.L.

Methods of determining low concentrations. X. Microalkalimetry. S. L. Kagan. *J. Gen. Chem.* (U.S.S.R.) 8, 170-81 (1938); cf. Isbmova-Gol'dfeld, C. A. 29, 6540. Solns. of HCl, in concns. 0.1, 0.02, 0.01 and 0.002 N, were used in titrating 0.02026 N $Ba(OH)_2$, and 0.002 N, were used in titrating ... in 3 series of expts., where the amts. of $Ba(OH)_2$ in each series were 0.5, 1 and 2 cc., resp. It was found that the 0.02 N HCl soln. gives a smaller "scattering" of results (cf. Gelmann and Holtz, C. A. 22, 3621) than 0.1 but more than the 0.01 and 0.002 N solns. The best results were obtained with 0.01 and 0.002 N HCl solns. for all vols. of $Ba(OH)_2$ soln. used. S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910015-9"

PHASE I BOOK EXPLOITATION 215

Pakidov, Petr Aleksandrovich

Novaya metodika rascheta tekhnologicheskikh razmerov i dopuskov pri mekhanicheskoy obrabotke detaley (New Method of Calculating Technological Process Dimensions and Tolerances in Machining Parts) Moscow, Mashgiz, 1956. 42 p. (Obmen tekhnicheskim opytom) 6,500 copies printed.

Reviewers: Zaretskiy, A. R., Engineer, and Kagan, S. L., Engineer; Tech. Ed.: Dugina, N. A.; Ed.-of the Ural-Siberian Branch of Mashgiz: Sustavov, M. I.

PURPOSE: The booklet is intended for engineering and technical personnel.

COVERAGE: The booklet describes the basic properties of dimension chains and methods for chain solutions, characteristic features of allowances and tolerances between successive machining operations. A method is given for calculating technological dimensions and tolerances involved in machining parts. A new method of calculating process dimensions measured from reference planes subject to further machining is presented and a new method of studying complex dimension chains having practical applications in plants is given.

Card 1/3

Publication of the booklet was recommended by the Omsk Machine Building Institute and the Ural Branch of the Scientific and Technical Society of Machine Industry. There are 6 Soviet references.

TABLE OF CONTENTS:

Foreword	3
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S/110/61/000/002/009/009
E194/E455

9,6000 (1040,1089,1067)

AUTHORS: Lavrinovich, L.L., Candidate of Technical Sciences, Barsukov, I.A., Engineer and Kagan, S.M., Engineer

TITLE: Increasing the Accuracy of Measurement of Certain Parameters of Electrical Machines

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.2, pp.64-75

TEXT: There are numerous types of instrument for the measurement of the frequency, rotational speed and slip of electrical machines but their range of measurement is very restricted and they are not very accurate. For greater accuracy of measurement it is necessary to develop counter-type instruments which give a direct reading of the values to be measured. With counter-type instruments, the accuracy of measurement of such magnitudes as frequency or speed is much higher. However, until recently, although methods existed, there were in fact no instruments suitable for measurements at sonic frequency and high speeds. With the development of Soviet decatron lamps which can be used to count in the decimal system, it has become possible to make a fairly simple instrument for general use for the measurement of speed, frequency and slip. The use of decatrons

Card 1/5

sets no limits on the range of values to be measured. The simplicity decatron circuitry and the fact that direct readings are obtained in the decimal system is advantageous in the sonic and infra-sonic frequency ranges. An instrument has been developed for the measurement of sonic frequency, speed and slip of electric motors which can handle frequencies up to 20000 cycles, speeds up to 1200000 rpm in three ranges, and slip in a number of ranges up to 0.000001%. In principle, the instrument consists of a photo-electronic signalling device and a decatron counter, with an appropriate supply source. The photo-electronic signalling device converts light signals into voltage impulses which are measured by the counter. The principal components of the counter are the special gas-filled decatron lamps which count impulses in the decimal system. The decatrons are described, along with their control circuit. They fulfil the role of a counting and memory device. The decatron counter is the fundamental part of the instrument; it consists of a counting-chain and a time-chain, an electronic switch and quartz oscillators of 10000 and 16666.6 c/s. The counting-chain comprises 6 decatrons which shine immediately opposite numbers on the front panel. The counting-chain is

controlled by a rectangular switching impulse of positive polarity received from the electronic switch. In the absence of a commutating impulse, the counting-chain blocks and input signals received from the former do not affect the counter. The time-chain is identical with the counting-chain and is provided to increase the period of repetition of time signals. The signals applied to the time-chain are: from the quartz generators of 16666.6 c/s, for measuring speed; from the supply circuit of the induction motor, for measuring slip; from the quartz generator of 10000 c/s, for measuring frequency. The electrical part of the photo-electronic signalling device consists of the following components; an incandescent lamp; a photo-electronic convertor based on a photo-electronic multiplier type ФЭУ-31 (FEU-31); an amplifier based on triode type 6Н2П (6N2P). A ray of light from the lamp passes through an optical system on the rotating object and the reflected beam is picked up by the cathode of the photo-electronic multiplier, which has eight emitters. At the moment of reflection of the light beam, a negative impulse is formed in the anode load of the photo-convertor and is applied to the amplifier triode. Under static conditions in the absence of an impulse

Increasing the Accuracy ...

this triode is quiescent. The instrument as a whole consists of two units, the photo-electronic signalling device and the decatron counter. The power supply is fitted below the decatron counter; the electronic switch, quartz generators and other equipment are in the upper part. The instrument is simple to use. The accuracy of the instrument proper depends on the accuracy of adjustment of its parts and in particular on the adjustment of the quartz oscillators. The inherent error of the instrument is analysed and is shown to be the same as the frequency error of the quartz generator. Consequently, the inherent errors of the instrument when measuring frequency and speed are $\pm$ 0.01%. When measuring slip the inherent error of the instrument is zero, as the source of time signals is not the quartz generator but the motor supply circuit at the time of measurement. As the counting method can only count whole numbers of impulses, errors can arise through failure to register fractions of a period. This error is analysed for two cases: when it is positive and too many impulses are counted and when it is negative and too few are counted. The method of calculating the total error in particular cases is explained and two numerical

Card 4/5

LAVRINOVICH, L.L., kand.tekhn.nauk; BARSUKOV, I.A., inzh.; KAGAN, S.M., inzh.

Increase in the precision of the measurements of certain parameters of electric machinery. Vest.elektroprom. 32 no.2:64-75 F '61. (MIRA 15:5)

(Electric machinery) (Electric measurements)

KAGAN, S. S.

"Studies in the Field of Homologues of the Camphor group. XIV. On some New Derivatives of a-Isocamphynylone and on its two nearest homologues." by S. S. Nametkin and S. S. Kagan (p. 890)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1946, Volume 16, No. 6

Chem. Lab., Moscow State U.

KAGAN, S.S.

Bonus system for engineering and technical personnel in plants of the chemical industry. Khim.prom. no.2:97-98 Mr '56. (MLRA 9:8)
(Chemical industries) (Bonus system)

SEGAL, A.Ya.; KAGAN, S.S., red.; SHPAK, Ye.G., tekhn. red.

[Handling of nitro and amino compounds] Pamiatka po obrashcheniiu s nitro i aminoproduktami. Moskva, Goskhimizdat, 1961. 19 p. (MIRA 15:4)
(Nitro compounds) (Amino compounds)
(Chemicals--Safety measures)

DOBKIN, V.M.; KAGAN, S.S.; KIRDIN, K.K.

Automation of batch manufacturing processes in the chemical industry.
Zhur.VKHO 6 no.5:559-563 '61. (MIRA 14:10)
(Chemical industries) (Automatic control)

KAGAN, S.S.

Kagan, S.S. "A complex study of the settlement of a region, and the improvement of sanitary conditions", (The organization and program of operations of the Kiev Medical Institute), Vracheb. delo, 1949, No. 1, paragraphs 73-76.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

KAGAN, S. S.

PA 48/49T59

USSR/Medicine - Hygiene and Sanitation, Teaching
Medicine - Social Hygiene

Mar/Apr 49

"Theory of the Soviet Health Program," S. S. Kagan, Prof, Kiev, 4 pp

"Sov Zdravookhran" No 2

Disagrees with various parts of Prof Batkis' article. Questions Batkis' statement that social hygiene should be re-established as a separate subject for study. Criticizes Batkis' statements on sanitation statistics and on merging of social hygiene services with tuberculosis and venereal disease services.

48/49T59

KAGAN, S. S.

28575

Nikolay Al/eksandrovich S/emashko, Ego Zhizn/ennyy Putbi D/eyat/elbnostb (1874-1949) Vrach/eb D/elo, 1949, No. 9, STB 839-44, S. Portr.

SO: LETOPIS NO. 38

KAGAN, S. S.

Jan/Feb 50

USSR/Medicine-Diagnosis, Quality
Hospitals, Children's

"Quality of Diagnostic Procedures in the Unified Children's Therapeutic Prophylactic Institutions," N. N. Sachuk, Chair of Orgn of Pub Health, Kiev Order of Labor Red Banner Med Inst imieni Acad A. A. Bogomol'ts

"Pediatriya" No 1, pp 50-55

Tabulates and discusses data on results of consolidation of children's consultations and polyclinics with children's departments and hospitals in Kiev. Quality of diagnosis has strongly improved. In the age group up to four quality is better than for group from four to 14. Chief, Chair of Orgn of Pub Health: Prof S. S. Kagan.

PA 163T33

PTUKHA, M.V., professor; KAGAN, S.S., doktor meditsinskikh nauk, professor.

Over-all morbidity registration method of the Ministry of Public Health of the U.S.S.R. Sov.zdrav. 14 no.5:27-32 S-O '55. (MLRA 8:12)

1. Deystvitel'nyy chlen AN USSR, chlen-korrespondent AN SSR, zasluzhennyy deyatel' nauki USSR (for Ptukha)

(VITAL STATISTICS,
morbidity registration system of ministry of health in Russia)

KAGAN, S.S., professor (Kiyev)

Tasks of sanitary and epidemic control stations in the control of tuberculosis. Gig. i san. 21 no. 9:51-54 S '56. (MLRA 9:10)

1. Iz Kiyevskogo oblastnogo otdeleniya Vsesoyuznogo nauchnogo obshchestva gigiyenistov.
(TUBERCULOSIS, prev. and control in Russia, tasks of sanitary & epidemiol. stations)

KAGAN, S.S., prof. (Kiyev)

Origins of Soviet sanitary organization in the Ukraine: some features of its develooment. Gig. i san. 22 no.12:38-43 D '57 (MIRA 11:3)

(SANITATION
in Russia, develop. & organiz. (Rus)

KAGAN, S.S., prof. (Kiyev)

Petr Ivanovich Kurkin, the founder of Russian public health statistics. Vrach.delo no.9:989-991 S'58 (MIRA 11:10)
(MEDICAL STATISTICS)
(KURKIN, PETR IVANOVICH, 1858-1934)

KAGAN, S.S., prof.

Aleksandr Vasil'evich Gliko; one of the oldest Soviet sanitary physicians. Gig. i san. 23 no.4:85 Ap '58. (MIRA 11:6)
(GLIKO, ALEKSANDR VASIL'EVICH, 1874-1956)

KAGAN, S. S.

"Problems of study of population morbidity."

Report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists. 1959

BRUSHLINSKAYA, L.A.; MAZUR, M.M., dotsent; RODOV, Ya.I., dotsent;
KAGAN, S.S., prof.

"Critique of bourgeois theory and policy on population" by B.IA. Smulevich. Reviewed by L.A. Brushlinskaia and others. Sov. zdrav. 19 no.7:83-85 '60. (MIRA 13:8)
(POPULATION) (SMULEVICH, B.IA.)

KAGAN, S.S., prof. (Kiyev)

Modern meaning of the terms "morbidity" and "diathesis".
Sov.zdrav. 19 no.10:54-58 '60. (MIRA 14:1)
(MEDICINE--TERMINOLOGY)

KAGAN, S.S., prof.

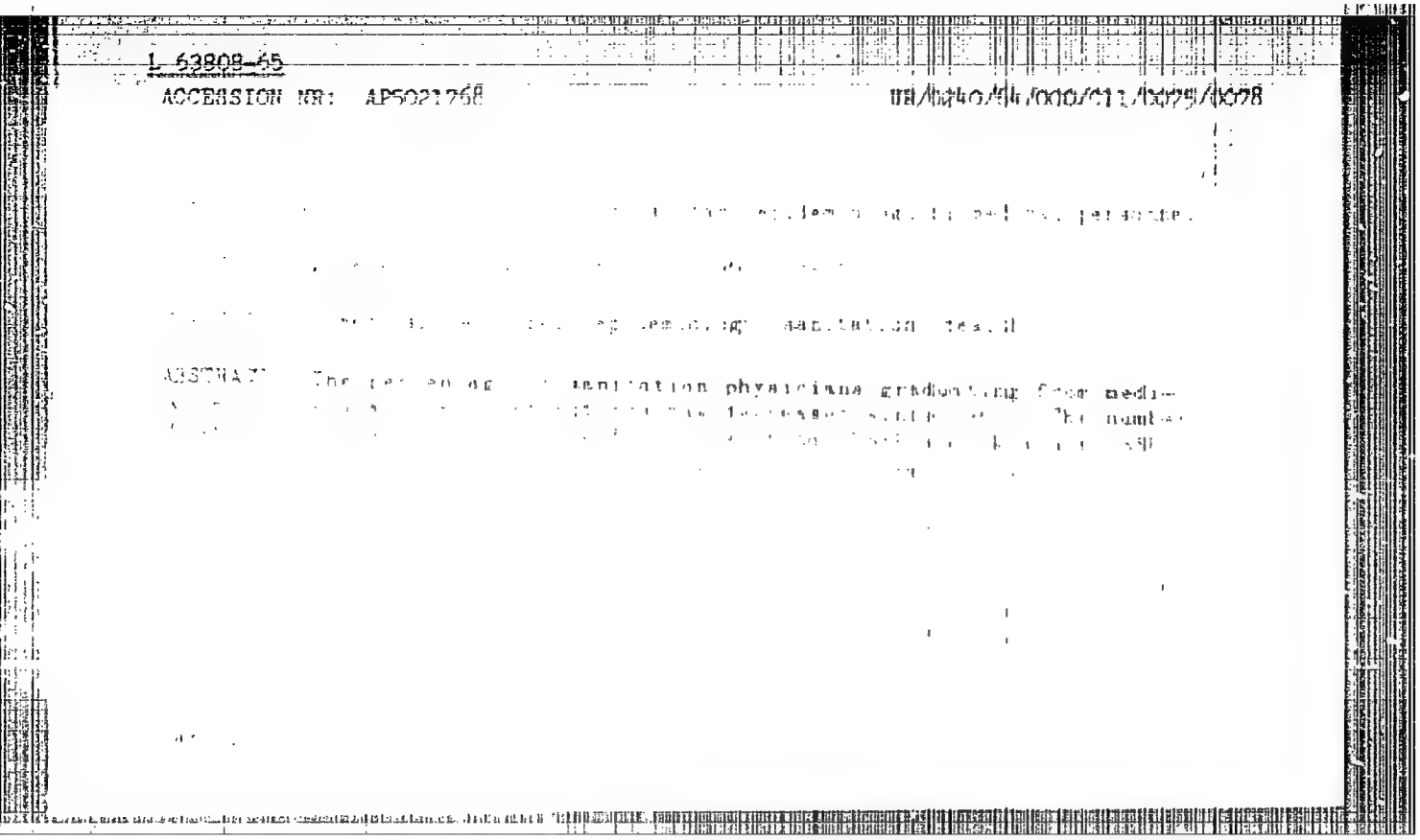
"Critique of bourgeois population theories and policy" by B.IA. Smulevich. S.S. Kagan. Gig. i san. 25 no. 5:111-115 My '60. (MIRA 13:10)

(DEMOGRAPHY) (SMULEVICH, B.IA.)

KALYUZHNYY, D.N., prof.; KAGAN, S.S., prof.

Exhibition which has gone down in the history of hygiene and public health; on the 50th anniversary of the Dresden International Hygiene Exhibition. Vrach. delo no.5:125-128 My '62. (MIRA 15:6)

1. Chlen-korrespondent AMN SSSR (for Kalyuzhnyy).
(PUBLIC HEALTH--EXHIBITIONS)



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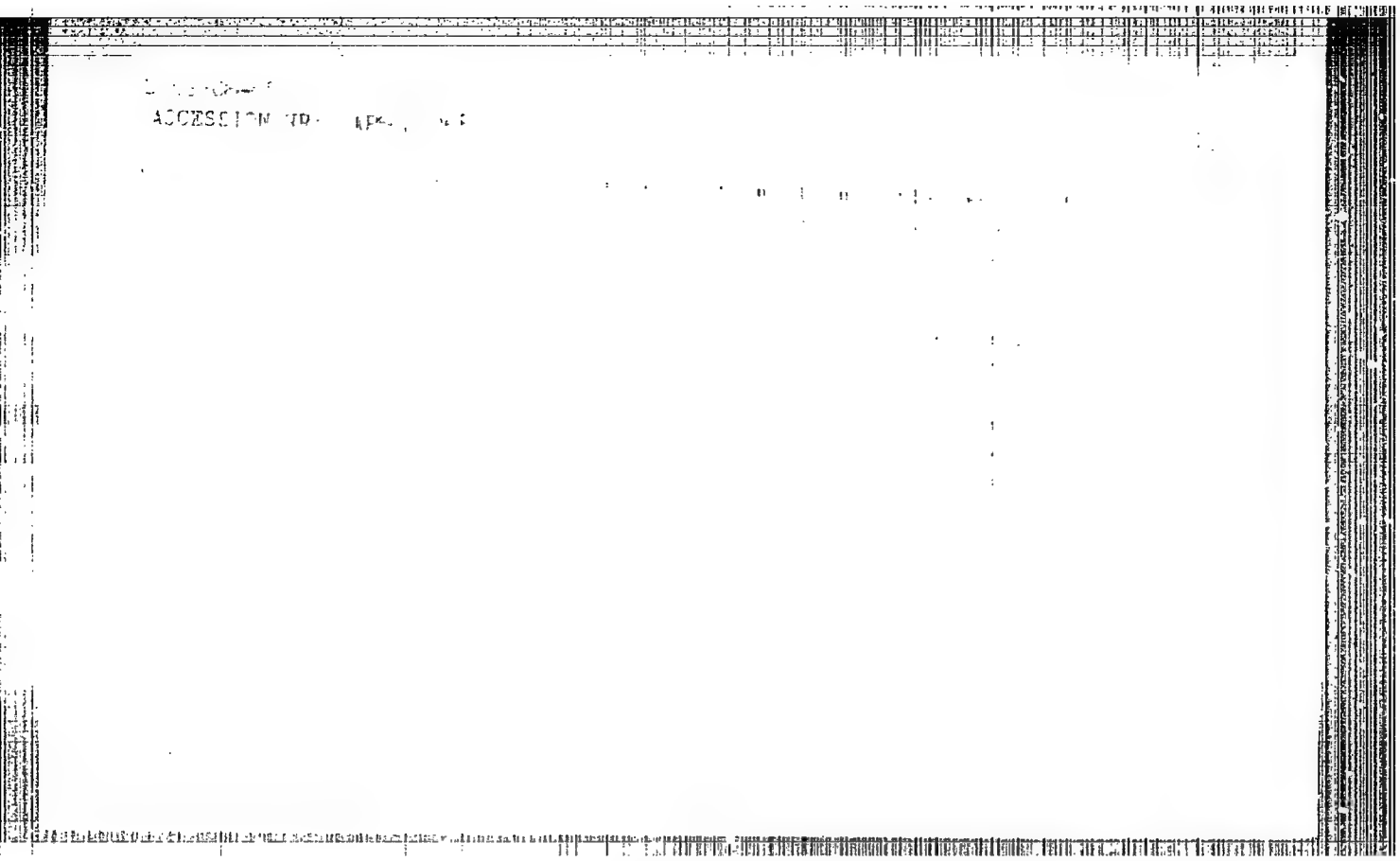
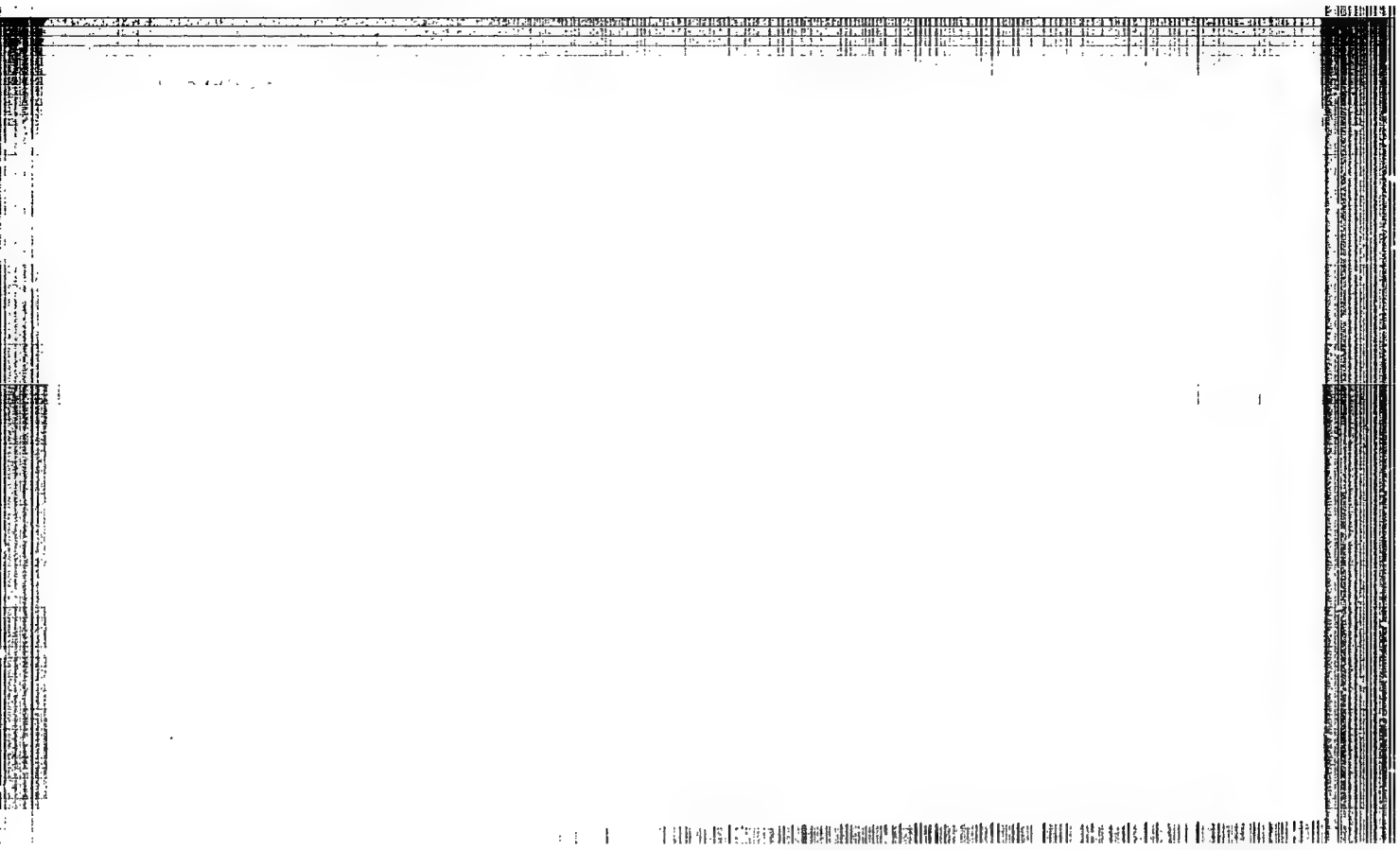
ACCESSION NR: AP5021768

ABSTRACT: [illegible] application physicians graduating from medi-
[illegible]





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K... [illegible] [Kalan, S...], prof.; [illegible]LENKO, K.F.,

[illegible]

[Outstanding] Ukrainian public health worker, Academician [of] the Academy of Sciences of the Ukrainian S.S.R., O.V. [Korchak]-Chepurkivs'kyi] [Vydatnyi] sanitarnyi diiach [Ukrainy] - akademik AN [URSR] O.V.Korchak-Chepurkivs'kyi. [Vrach.] [delo] Zdorov'ia, [illegible] [illegible] (MIRA 18:?)

KRAYTSBERG, M.I., kandidat tekhnicheskikh nauk; KAGAN, S.Ya., inzhener.

Induction motor with phase and short-circuited windings on the rotor. Vest.elektroprom. 27 no.9:27-31 S '56. (MLRA 10:9)

1. Moskovskiy inzhenerno-stroitel'nyy institut imeni V.V.Kuybysheva (for Krayzberg). 2. Khar'kovskiy elektromekhanicheskiy zavod (for Kagan).

(Electric motors, Induction)

SOV/112-58-1-570

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 84 (USSR)

AUTHOR: Malevanyy, A. I., Kagan, S. Ya., and Mayzlish, Ye. Ya.

TITLE: Electrical Equipment of Immersible Pumps for Artesian Wells (Elektrooborudovaniye pogruzhnykh elektronasosov dlya artezianskikh skvazhin)

PERIODICAL: V sb.: Raboty M-va elektrotekhn. prom-sti SSSR po mekhaniz. i avtomatiz. nar. kh-va, Moscow, 1956, pp 38-40

ABSTRACT: The Khar'kov plant KhEMZ manufactures immersible MAPZ electric motors 2, 5, 12, 35, and 60 kw, 380 v, for driving immersible pumps intended for artesian wells with pure water (without mechanical or aggressive chemical impurities) with a temperature up to 20° C. Motor cooling and bearing lubrication is effected by the water being pumped. Stator winding has vinyl insulation and is not sealed. Motor journals are of stainless steel pressed over the motor shaft; bearing bushings are made of textolite. A control station and PVVP cable are furnished with the motor. The control stations for 35- and 60-kw motors have a provision for connecting a float relay for automatic pumping.

I. I. S.

AVAILABLE: Library of Congress

Card 1/1 1. Pumps--Control systems 2. Electric motors--Design

KAGAN, S.Ya. (Stalinskaya oblast')

Formulae of the roots of quadratic equations. Mat. v shkole no. 3:61-62 My-Je '61. (MIRA 14:5)
(Equations, Quadratic)

K[illegible]n, G. YE.

29940

Sluchay izvlyechyeniya [illegible] inorodnogo tyela iz [illegible] [illegible]. [illegible] [illegible], 1949, No. 4. s. 72-73.

SO: [illegible] No. 40

Translation: "Case of Dislodgement of a Foreign Body in the Upper Part of the Esophagus of a Ten-Month Old Infant."

Honored Dr. RSFSR. Cand. Med. Sci.

Otorhinolaryngological Unit, 6th Gor'kiy Polyclinic

KAGAN, S. Z.

PLANOVSKIY, A. N. and KAGAN, S. Z.

"Continuous Sulfonation of Benzene," A/ N. Planovskiy and S. Z. Kagan, Promyshlennost Organicheskoy Khimii (USSR) 7: 296-304, 1940.

Since we are not experts on the subject of sulfonation, it is difficult to evaluate the article. It contains a far more extensive theoretical study of the problem than any other found so far. Apparently the authors are acquainted only with the pilot plant operations and are fairly new to the field. The article makes no pretense to show knowledge of actual plant operations.

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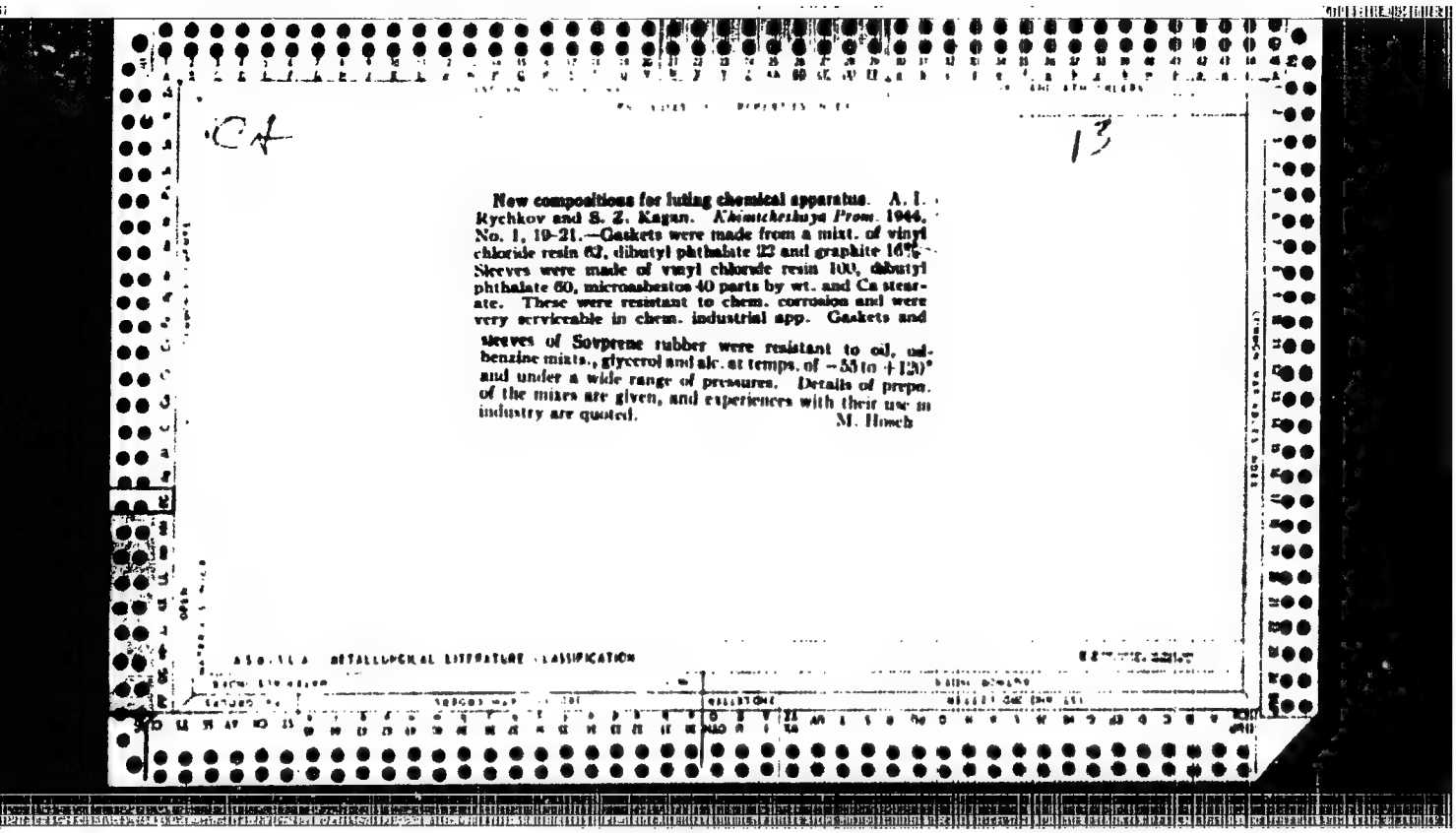

CA

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New compositions for luting chemical apparatus. A. I. Rychkov and S. Z. Kagan. *Khimicheskaya Prom.* 1944, No. 1, 19-21.—Gaskets were made from a mixt. of vinyl chloride resin 62, dibutyl phthalate 22 and graphite 16%. Sleeves were made of vinyl chloride resin 100, dibutyl phthalate 60, microasbestos 40 parts by wt. and Ca stearate. These were resistant to chem. corrosion and were very serviceable in chem. industrial app. Gaskets and sleeves of Sovprene rubber were resistant to oil, oil-benzine mixts., glycerol and alc. at temps. of −55 to +120° and under a wide range of pressures. Details of prepn. of the mixes are given, and experiences with their use in industry are quoted.

M. Hoseh

ASTIA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

Ca

PROCESSES AND

10

Continuous process for the production of benzenesulfonic acid. A. N. Planovskii and S. Z. Kagan. *Khim. Promyshlennost Prom.* 1944, No. 9, 5-10.—In order to devise a continuous sulfonation process for benzene a study was made of the effect of temp., moisture content of the recycle, and surface area of contact. The time required for sulfonation (experimentally detd.) is $t = (1/k) \times 2.3 \log a/(a - x)$, where k is detd. by the H_2O content of the recycled benzene, construction of app., and temp.; a is the initial concn. of H_2SO_4 in mol. %; and x is the content of benzenesulfonic acid and sulfones in the reaction product expressed in mol. %. In an app. where the incoming benzene vapors are passed into the H_2SO_4 through a porous plate, the temp. of the reaction is 180°, the av. concn. of H_2O in the recycle is 3.5%, and the benzene is recirculated 8 times, $k = 3.8$. When the app. is of the bubbling type, while the other conditions remain the same, $k = 2$. In an app. where the 2 phases are brought into direct contact, $k = 0.435$. The preferred conditions for sulfonating benzene are: temp. 180°, no. of recycling times 8, benzene vapor fed through bubbling caps, height of liquid above the inlet of the benzene vapor 100 mm., velocity of vapor in the sulfonator 0.1 m. per sec., velocity of vapor through bubble cap apertures 6.5 m. per sec. Under these conditions $k = 2$ and sulfonation in an intermittent process requires 1.5 hrs. The sulfonation can be made continuous only in a multistage app. Under fixed conditions the time required for sulfonation varies with the no. of stages as follows (no. of stages, efficiency, and time in hrs., resp., given): 1, 0.15, 10.00; 4, 0.455, 3.37; 8, 0.660, 2.25; 16, 0.872, 1.71; 24, 0.965, 1.56. It appears that the app. should consist of 7-8 sections. In a 7-sections app. the concn. of the reaction product in sections 2-7, expressed in mol. %, will be 60.7, 77.7, 83.6, 87.8, 91.0, and 93.3. An industrial-scale sulfonation app. was designed, in which H_2SO_4 is pumped from a reservoir through a pressure regulator and a metering device into a sulfonator. Benzene is pumped from a reservoir of fresh benzene or from a reservoir of benzene condensate through a metering device and a combination vaporizer-superheater. Part of the superheated vapor (approx. 180°) is fed into the sulfonator and the other part is passed through the bottom into a 6-plate column. The reaction product in the sulfonator contg. 30% of free H_2SO_4 flows continuously from the sulfonator into the upper part of the column. Flowing downward, this product reacts with the ascending benzene vapors so that when it reaches the bottom where tech. benzenesulfonic acid is withdrawn it contains only 3-4% of free H_2SO_4. H_2O-contaminated benzene vapors are withdrawn through the top of the sulfonator and the column. The vapors pass through a condenser and cooler into a separator where the layers of H_2O and benzene sep. The H_2O is discarded and the benzene is passed through a drier and neutralizer into the reservoir for benzene condensate. The sulfonation time in such an app. is calcd. to be 1.5 hrs. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KASATKIN, A.G.; KAGAN, S.Z., redadtor; POGUDKIN, P.V., tekhnicheskiy redaktor.

[Basic processes and apparatus in chemical engineering] Osnovnye protsessy i apparaty khimicheskoi tekhnologii. Izd. 4-oe, perer. Moskva, Gos. nauchno-tekhn. izd-vo khimicheskoi lit-ry, 1948. 916 p. (Chemical engineering) (MLRA 8:7)

KAGAN, S. Z.

Organic high temperature thermoconductors and their use in industry Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1951. 171 p. (51-34391)

QD511.K25

KAGAN, S.Z.

KASATKIN, A.G., professor, doktor tekhnicheskikh nauk, redaktor; ZHUZHIKOV, V.A., redaktor; KAFAROV, V.V., redaktor; KAGAN, S.Z., redaktor; LUR'YE, M.S., tekhnicheskiy redaktor

[Processes and apparatus used in chemical technology] Protsessy i apparaty khimicheskoi tekhnologii; sbornik rabot. Pod red. A.G. Kasatkina. Moskva, Gos. nauchno-tekhn. izd-vo khimicheskoi lit-ry, 1953. 115 p. [Microfilm] (MLRA 7:10)

1. Russia (1923- U.S.S.R.) Ministerstvo khimicheskoy promyshlennosti.
(Chemistry, Technical)

KAGAN, Solomon Zakharovich.

PLANOVSKIY, Aleksandr Nikolayevich; RAMM, Vitaliy Maksimovich; KAGAN, Solomon Zakharovich; KUROCHKINA, M.I., redaktor; KRLIKH, Ye.Ya., tekhnicheskiy redaktor

[Processes and equipment in chemical technology] Protsessy i apparaty khimicheskoi tekhnologii. Moskva, Gos.nauchno-tekhn. izd-vo khim.lit-ry, 1955. 580 p. (MLRA 9:3)
(Chemical engineering--Apparatus and supplies)

KAGAN, S.Z., kandidat tekhnicheskikh nauk.

Hydrocyclones, their construction and design. Khim.prom.no.6:347-357 S '56. (MLRA 10:2)
(Separators (Machines))

KAGAN, S.Z.

RUMANIA/Chemical Technology - Chemical Products and Their Application - Processes and Apparatus for Chemical Technology. H-2

Abs Jour : Ref Zhur - Khimiya, No 3, 1958, 8236

Author : Kagan S.Z.
Inst :
Title : Hydrocyclones, Their Construction and Design.

Orig Pub : An. Rom.-Sov. Metalurgie si constr. masini, 1957, 11, No 2, 67-89

Abstract : A translation; See RZhKhim, 1957, 17907.

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